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RE: Using the BRFSS to Monitor the Uninsured in Montana

Montana has invested in two telephone surveys that collect different levels of information on the health insurance coverage of its state residents — the *2003 Household Survey on Montana's Uninsured* (conducted by the University of Montana's Bureau of Business and Economic Research) and the *Montana Behavioral Risk Factor Surveillance System* (BRFSS) an ongoing survey conducted by the Montana Department of Public Health and Human Services (DPHHS) in collaboration with the Centers for Disease Control and Prevention (CDC).

The *2003 Household Survey on Montana's Uninsured* provided Montana with the most in-depth information on health insurance coverage, access and utilization, but there is some concern about the future administration of the household survey due to costs. Recognizing the need for these data, Montana is looking to modify and augment its current BRFSS survey instrument, in order to institutionalize a more sustainable source of micro-data on health related issues. As part of its 2005 State Planning Grant (SPG) continuation funding, DPHHS is examining the utility of using the Montana BRFSS for ongoing monitoring of state health insurance coverage.

In July 2006, the SPG Steering Committee and the Project Team members convened to discuss the available data sources for monitoring the uninsured in Montana and the sustainable long-term data collection strategies. This memo summarizes Montana's health insurance coverage access data needs and available data sources; and provides recommendations to augment the current BRFSS survey instrument for ongoing monitoring of the uninsured in Montana. The recommendations are options that must in turn be discussed by the SPG Steering Committee and Project Team in light of their policy priorities and available resources.

OVERVIEW OF STATE SURVEY DATA SOURCES

Household and telephone health surveys are the primary sources of data on the uninsured. There are four key sources of data that provide estimates of health insurance coverage along with additional demographic data that can be used to gauge trends and characteristics of the uninsured in Montana. Two are Montana-specific, and two are federally-administered surveys. In general, we recommend that state staff routinely monitor all available sources of data to get a thorough understanding of the uninsured in Montana over time. Because each data source uses a different methodology, a different sampling strategy and a different estimation methodology, each will produce a different estimate. However, each survey provides important information that can be used in the overall monitoring strategy for the state of Montana. The data sources are highlighted below with more details on each source in Table 1. The remainder of this memo summarizes the data needs and recommendations regarding Montana's BRFSS.

1. **2003 Household Survey on Montana's Uninsured:** The Household Survey on Montana's Uninsured was conducted in 2003 with financial support from the SPG program awarded to the DPHHS. It is the "largest and most comprehensive survey on health insurance[1]" conducted by Montana, and is designed to estimate both the point-in-time and the full-year uninsurance rate for the previous year. The survey was based on a stratified random digit dialing (RDD) methodology. The data were collected by the Survey Research Center at The University of Montana-Missoula, Bureau of Business and Economic Research from December 2002 to May 2003. Both adults and children were sampled and a total of 5,074 interviews were completed.[1] In addition to questions on type/source of coverage and length of time insured/uninsured, the survey included more in-depth questions related to insurance coverage, access and utilization.

2. **Montana Behavioral Risk Factor Surveillance System Survey (BRFSS):** The BRFSS is an on-going, cross-sectional telephone survey which is fielded monthly by the state public health departments in cooperation with the CDC to gauge health risk behaviors and health practices among the non-institutionalized adult population (18 years and older.) BRFSS has become the primary source of information on health care access, clinical preventive practices and chronic disease risks for the adult population in many states. The BRFSS questionnaire is comprised of core questions, optional modules, and state-added questions on issues of specific interest to the state. While the BRFSS was originally designed to collect data at the state-level, a number of states, including Montana, have stratified their samples, enabling them to make estimates for sub-state regions. In Montana, the DPHHS is the agency in charge of fielding the BRFSS in collaboration with the CDC.

3. **Current Population Survey (CPS):** The Current Population Survey (CPS) is a monthly survey that the Census Bureau conducts to mainly provide data on labor force participation and unemployment. Data on health insurance coverage is collected through a supplement to the CPS, known as the Annual Social and Economic Supplement (ASEC). The survey is designed to provide an estimate of those who were uninsured throughout the previous calendar year, also known as the full-year uninsurance rate.[2] The CPS-ASEC is representative of all fifty states and

D.C., and has included approximately 78,000 households per year since 2000. [3,4] The CPS-ASEC data is collected through a combination of telephone and in-person modes using computer-assisted instruments. This is the primary source of data to estimate state and national estimates of health insurance coverage.

4. **State and Local Area Integrated Telephone Survey (SLAITS):** The State and Local Area Integrated Telephone Survey (SLAITS) [5] is a sampling and survey mechanism developed by the CDC's National Center for Health Statistics (NCHS). The SLAITS is an ongoing surveillance system with survey estimates at the state and local level for tracking and monitoring the health and well-being of children and adults. The SLAITS was first piloted in 1997 in two states (Iowa and Washington) and consisted of a series of questions related to health such as insurance, access to care and health status. In 1998, a SLAITS module on child well-being and welfare issues was implemented. A subsequent National Asthma Survey was fielded in 2003 and 2004 to get data on the health, socioeconomic, behavioral, and environmental factors related to asthma. This is not an ongoing survey but a vehicle if funding is available. All surveys to date have been sponsored by the federal government.

TABLE 1: Comparison of Data Sources: 2003 Household Survey on Montana's Uninsured, Montana BRFSS, CPS-ASEC, and SLAITS

ATTRIBUTES	DATA SOURCES			
	BRFSS Montana	**2003 Montana HH Survey**	**SLAITS**	**CPS-ASEC**
State Role in Design	State can control and customize through optional modules and state-added questions	State has most control	To date all SLAITS surveys are funded and developed by federal government	State has no control
Survey Content	Primary focus is on health risk behaviors, limited questions on the specifics of health insurance coverage, some questions on access	Detailed questions on coverage type, source, access and utilization as well as attitudes and preferences	Detailed questions on coverage type, source, access and utilization for select population groups (e.g. children)	Detailed questions on coverage type and source. Limited questions on access and utilization
Population Coverage	Adults (18 years and older)	Children and adults	Primarily used to survey children	Children and adults
Sample Size for Montana	4,983 respondents (2005)	5,074 respondents (2003)	...	1,967 respondents (CY 2005)[6]; 2,120 respondents (CY 2003)[7]
Sampling/ Data Collection Methodology	Random Digit Dial telephone survey	Random Digit Dial telephone survey	Random Digit Dial telephone survey	Area Probability Design includes both in-person and telephone surveys
Reference Period for Uninsurance	Point-in-time (can be modified for recall)	Point-in-time and full-year	Point-in-time	Any time in previous calendar year

BACKGROUND ON THE MONTANA BRFSS

While the *2003 Household Survey on Montana's Uninsured* provided in-depth information on health insurance coverage, access and utilization, the Montana BRFSS may offer a viable, reasonable alternative. The BRFSS has a distinct advantage over the other data sources given its design (the mandatory core, state-added questions and optional modules) which gives control and flexibility to the state, and the opportunity to customize the BRFSS to meet state data needs, along with the uniformity of the mandatory core which facilitates cross-state and cross-time period comparisons. To further demonstrate the potential utility of the Montana BRFSS as an ongoing source of data and information on health care coverage/access, the 2006 BRFSS core included questions that estimate the following:

- Health insurance coverage or uninsured
- Cost barriers in accessing care when needed
- Time lapse since the last routine check-up
- Personal doctor or health care provider

Two state-added questions on health care coverage were added to the 2006 Montana BRFSS which estimate the following:

- Reason uninsured
- Length of time uninsured

In addition, a random child selection module and an optional module on childhood asthma prevalence were added to the 2006 Montana BRFSS.

Montana's BRFSS sample sizes have shown impressive increases over time— in 2005, an estimated 4,983 interviews were completed, including over-sampling counties with American Indian reservations and large population areas such as the Yellowstone/Carbon counties to be part of the Selected Metropolitan/Micropolitan Area Risk Trends (SMART) BRFSS MMSA dataset. In 2006, the sample size increased to 6,000 respondents, and two additional strata have been added, Missoula and Cascade counties to obtain further county level data. These larger sample sizes are likely to enhance Montana's ability to compare findings across policy-relevant sub-populations, e.g., insured/uninsured, geography, age, race, or income groups. In 2003, Montana began weighting their BRFSS data to examine regional differences based on the legislatively approved five Health Planning regions.

The Montana BRFSS is already being used to monitor chronic conditions and health behavior trends in the adult population.[8] **The BRFSS was not designed as a health insurance survey and provides limited data on insurance type, access and utilization, and employment measures which are of significance to Montana.** These areas could be potential targets for augmentation in future surveys. We briefly review past Montana BRFSS questions (from 2000 to 2006) and sample questionnaire items that have been fielded in the *2003 Household Survey on Montana's Uninsured* and by other states as potential additions to the 2007 BRFSS (see Appendix I and II). Any new questions would need to be integrated with the existing required core questions.

Another significant shortcoming of the BRFSS is that it only samples adults 18 years and older, and does not sample children. This may be remedied by designing and funding a child supplement as discussed below. Like all telephone-based surveys including the BRFSS, sample

coverage is an issue as households without telephones and cell-phone only households are systematically excluded. Research shows that people in these households are more likely to be uninsured, and their exclusion results in a downward bias in the survey estimates. [9,10,11] Although no current statistical adjustment exists to account for cell-phone only households, an adjustment for coverage error due to lack of telephone service can be corrected by performing telephone service adjustments to the survey weights for households with interrupted telephone service. This would require the addition of several questions asking about experiences of telephone service interruption.

RECOMMENDATIONS

The following are recommendations to inform and improve upcoming initiatives to augment the Montana BRFSS in future years.

1. **Modify and augment existing BRFSS questionnaire items across the following categories to meet data needs**
    - Health insurance coverage type/access/utilization questions for adults and children
    - Employment characteristics-related questions

Augmenting questionnaire items across these categories would generate micro data similar to the *2003 Household Survey on Montana's Uninsured* and yield better quality descriptive and reliable estimates. To inform the SPG Steering Committee and Project Team decisions about the potential health insurance coverage type/access/utilization related questions that could be included in subsequent Montana BRFSS versions, we review questions included in the Montana BRFSS from 2000-2006 and also list questions from other survey sources. See Appendix I for health insurance-related questions on adults; Appendix II for questions on employment characteristics; and Appendix III for random child selection techniques, health insurance-related questions on children and a discussion on the placement of these questions in the adult BRFSS.

The inclusion of new questions should be integrated with the existing required core questions, policy priorities and available resources. In deciding which specific questions to add to future BRFSS questionnaires, one consideration is the desire to be able to provide some trend data by using items included in the *2003 Household Survey on Montana's Uninsured*. We also suggest that items used to augment data on coverage type and access in the adult survey be used in the child survey.

2. **Include a child supplement to the adult BRFSS to address the need for data on trends in children's health insurance coverage/access to care**

Many of Montana's recent access expansion initiatives address the need for coverage for children. Although efforts are underway to collect more information on children through the Montana BRFSS, so far limited data is being collected—in 2005 a random child selection module was included in the survey in conjunction with the state-approved optional childhood asthma prevalence module. In 2006, Montana included the random child selection module and participated in the asthma callback survey for children and adults.

We recommend supplementing the adult Montana BRFSS with a child module as this may be the most expedient way of collecting data on this policy-relevant sub-population. An advantage of the child supplement tagged on to the end of the adult BRFSS is that the interviewer already has an adult respondent on the phone that is oriented to the content of the survey. Once a child is randomly selected, the interviewer could verify if the adult on the phone can answer questions related to the health insurance status/coverage/access/utilization for that child, if not, request for the appropriate adult who can, or schedule a callback. However, depending on the length of the child supplement and based on Montana's experience with the 2006 asthma callback for children, the BRFSS staff could decide whether an additional module on children tagged on to the end of the adult BRFSS or an independent call-back module is more desirable and cost-effective. Another cost-effective alternative would be to rotate in the child-specific health coverage module every other year. To inform decisions concerning the design of a child module for the BRFSS, we briefly describe the random child selection techniques as used by Montana and other states in their BRFSS in Appendix III.

3. **Fund the 2003 Household Survey on Montana's Uninsured periodically to meet more in-depth data needs.**

The 2003 state-level household survey is the most comprehensive source of health insurance information available to Montana. Micro-level household data are a rich resource for the social and economic variables that influence policy making, can provide powerful indicators of policy outcomes, and serve as an opportunity to collect data on timely relevant issues. Systematic and regular administration of the household survey also enables comparisons across time periods. It is yet another source for data on children for the years it is fielded. Rotating it periodically (for instance, every three-five years) is another way for Montana to collect these data.

OTHER DATA NEEDS

Other data needs expressed by the SPG participants and comments about the use of the BRFSS to meet those needs include the following:

1. **Monitoring barriers to access to care for those with and without health insurance coverage. Even with health insurance coverage there was a concern about getting access to care when needed either because of lack of comprehensive coverage or availability of providers.**

We acknowledge that the BRFSS provides some data on access and barriers to access to care. However, given limited resources and imminent data needs, we recommend incorporation of questionnaire items around insurance coverage type/access/utilization for children and adults, and employment characteristics. Asking detailed questions about benefits packages is difficult to collect and is better conducted through payer surveys. As mentioned before, to inform decisions around survey design, policy makers in Montana must decide which data will be most critical to formulating and evaluating current and future policy initiatives.

2. **There was some concern expressed about benefit structure and out-of-pocket costs for those with health insurance coverage.**

Detailed information on private health insurance benefits and costs are difficult to obtain through a survey such as the BRFSS. Some states routinely gather information about premiums and out-of-pocket costs, but there are concerns about how reliably this information can be measured and evaluated without detailed information about the context and circumstances of this spending (chronic conditions, high deductibles, individual or family policies, inability to judge appropriateness of use and costs, etc). Therefore, this information must be disseminated with caveats and care. Several states routinely collect data on health benefits and premiums through payer surveys that target the largest insurers in the state. The Medical Expenditure Panel Survey-Insurance Component is an excellent source of these data.

3. **Trends in employer-sponsored coverage for the state of Montana.**

Although the *2003 Household Survey on Montana's Uninsured collected some data on employer offers, eligibility for an offer and take-up, information on employer offer and take up rates are best obtained through an employer survey. We address these information needs in a related memo dated August 18, 2006 and recommend the use of the federal Medical Expenditure Panel Survey-Insurance Component which provides state level estimates on employer offer, take up and premium levels for aggregate trends on an annual basis along with periodic (every three-five years) detailed data through a more comprehensive state-specific employer survey administered through the University of Montana or the Department of Labor and Industry.*

SUMMARY

This memo highlights the data needs and existing resources for the state of Montana in its efforts to monitor the distribution of health insurance coverage and characteristics of the uninsured over time. Decisions regarding the use of the BRFSS as the primary data source should be made in the context of the limitations of this survey but also its strengths, including the existing and ongoing infrastructure of staff and resources, as well as the potential to augment the BRFSS to address additional data needs. We also want to highlight the benefits of a periodic in-depth household survey that could be fielded every three to five years to fill in the information gaps including information on and attitudes about recent policy initiatives. We also want to stress the importance of monitoring national data including the annual state-level estimates produced by CPS and additional survey data collected through SLAITS. These surveys can provide important information about specific elements of coverage and access and trends over time as well as comparisons to other states. We urge states to understand the strengths and limitations of the various state and national surveys, and to use the many data sources available as it is difficult, if not impossible, to meet all data needs in one survey. Finally, our recommendations include not only to augment the BRFSS but provide adequate funding for annual analysis and reports on the distribution of health insurance coverage trends for Montana.

NOTES

[1] Seninger, S. (2004). Household Survey and Employer Survey Findings about Health Insurance Coverage in Montana. Final report to the Montana Department of Public Health and Human Services. Missoula, MT: University of Montana, Bureau of Business and Economic Research. Available at: http://www.dphhs.mt.gov/uninsured/pdffiles/healthreportfinal.pdf Last accessed July 2006

[2] Although the CPS-ASEC is theoretically designed to estimate the full-year uninsurance rate, it is controversial if that is indeed the case. Some studies show that the CPS-ASEC estimate falls in range of the point-in-time estimates provided by three other national surveys, namely the MEPS-HC, NHIS and SIPP. Hence, the CPS estimate may be regarded as a point-in-time estimate. For more discussion on this, refer to Davern, M., K. Call, and L. Blewett. (2006). Differences in National and State Survey Estimates: A Literature Review. Report prepared for the U.S. Department of Health and Human Services, Assistant Secretary for Planning and Evaluation and the Agency for Healthcare Research and Quality Task 2.0. State Health Access Data Assistance Center (SHADAC). Document available from the authors upon request (daver004@umn.edu)

[3] U.S. Census Bureau. (2002). Current Population Survey technical paper #63 revised (TP63RV); Chapters 15 and 16. Washington DC: U.S. Census Bureau, March 2002. Available at: http://www.census.gov/prod/2002pubs/tp63rv.pdf

[4] Davern, M., T. Beebe, L. Blewett, and K. Call. (2003). Recent changes to the Current Population Survey: Sample expansion, health insurance verification and state health insurance coverage estimates. *Public Opinion Quarterly* Vol. 67. No. 4: 603-26.

[5] Blumberg, S., L. Olson, M. Frankel, L. Osborn, K. Srinath and P. Giambo P. (2005). Design and Operation of the National Survey of Children's Health, 2003. National Center for Health Statistics. Vital Health Stat 1(43). 2005 Also available at: http://www.cdc.gov/nchs/data/series/sr_01/sr01_043.pdf

[6] U.S. Census Bureau. (2006). Current Population Survey. Annual Social and Economic Supplement 2005. Washington DC: U.S. Census Bureau.

[7] U.S. Census Bureau. (2004). Current Population Survey. Annual Social and Economic Supplement 2003. Washington DC: U.S. Census Bureau.

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[9] Davern, M., J. Lepkowski, K. Call, N. Arnold, T. Johnson, K. Goldsteen, A. Todd-Malmlov and L. Blewett. (2004). Telephone service interruption weighting for state health insurance surveys. *Inquiry.* Vol. 41 No.3:280-90Frankel M., K. Srinath, D. Hoaglin, M. Battaglia, P. Smith, R. Wright, and M. Khare. (2003). Adjustments for non-telephone bias in random-digit-dialing surveys. *Statistics in Medicine* Vol. 22 No. 9:1611-2690.

[10] Frankel M., K. Srinath, D. Hoaglin, M. Battaglia, P. Smith, R. Wright, and M. Khare. (2003). Adjustments for non-telephone bias in random-digit-dialing surveys. *Statistics in Medicine* Vol. 22 No. 9:1611-26.

[11] Blumberg, S., J. Luke, and M. Cynamon. (2006). Telephone coverage and health survey estimates: evaluating the need for concern about wireless substitution. American Journal of Public Health 96, No. 5: 926-31, 2006 May.